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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/613,172	07/03/2003	Geoffrey D.M. Wilkie	LKMP:112US	9139	
7590	04/07/2006		EXAMINER VASUDEVA, AJAY		
Edward Tracy, Jr., Esq. Simpson & Simpson, PLLC 5555 Main Street Williamsville, NY 14221-5406			ART UNIT		PAPER NUMBER
			3617		
DATE MAILED: 04/07/2006					

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/613,172	WILKIE, GEOFFREY D.M.	
	Examiner	Art Unit	
	Ajay Vasudeva	3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-14 and 16-28 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 and 18 is/are allowed.
- 6) ☒ Claim(s) 2,3,5,7,8,11,12,16,19,21,22,25 and 26 is/are rejected.
- 7) ☒ Claim(s) 9,10,13,23,24 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

- The vessel is buoyant when the assembly is retracted, as set forth in claims 2, 3, and 16.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Straussler (US 2,390,747 A).

Re the previously presented claim 17, Straussler shows an arcuate truss assembly (fig. 2) for varying the dimensions of a vessel hull (fig. 1) having a plurality of members [4, 5, 6] pivotally joined at hinges [7, 8, 9]. The members are operatively arranged to vary the dimensions of the hull wherein an expanded truss assembly reconfigures the hull to an expanded dimension. The plurality of members is pivoted with respect to one another by hydraulic or pneumatic actuators (page 2, col. 2, line 8). A flexible membrane [3] covers the assembly in a watertight manner (fig. 4). The members of the truss assembly pivot in a plane that is coplanar with at least that portion of the hull which is formed by the members (fig. 2).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 3, 5, 7, 8, 11, 12, 16, 19, 21, 22, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Straussler (US 2,390,747 A).

As described in ¶3 above, Straussler shows an arcuate truss assembly (fig. 2) for varying the dimensions of a vessel hull (fig. 1) having a plurality of members [4, 5, 6] pivotally joined at hinges [7, 8, 9]. The members are operatively arranged to vary the dimensions of the hull wherein an expanded truss assembly reconfigures the existing hull shape to define an expanded dimension. In other words, the deployed assembly, in effect, itself becomes a part of the new expanded hull that is in contact with water. The plurality of members is pivoted with respect to one another by hydraulic or pneumatic actuators (page 2, col. 2, line 8). A flexible membrane [3] covers the assembly in a watertight manner (fig. 4). The members of the truss assembly pivot in a plane coplanar with at least that portion of the hull which is formed by such members (fig. 2).

Straussler, however, does not disclose the vessel as being buoyant when the truss assembly is retracted

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It is first point out that the term “**retracted**” has been broadly interpreted as being “**at least partially retracted**”, and has not been interpreted in a narrow context of being only “**completely retracted**”.

Further, it is an old and common engineering practice to provide adequate margin of safety during an engineering design. Specifically, it would have been obvious for an artisan at the time of the invention to design the retracting truss assembly so as to provide buoyancy for the vehicle at its full load condition, and then add an extra safety factor as a standard practice in engineering design. The motivation would have been to provide a clear margin of safety, thereby ensuring safety of the personnel and the equipment during adverse operational conditions.

Applicant may note that under certain conditions – such as under a no-load condition when the vessel did not have any onboard personnel and armament – at least a partial retraction of the assembly would have still provided adequate buoyancy to the vessel of Straussler. It may be noted that a “retraction” required by the claims does not necessarily have to be “complete retraction”, and even a slight amount of retraction – anything that is less than a fully extended state -- would still be considered a form of retraction.

6. Claims 6 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Straussler (US 2,390,747 A), as modified above, in view of JP 07-157977 A ('977).

Straussler, as modified above, shows an arcuate truss assembly having a flexible membrane made of water impervious canvas (p-1, col. 1, line 27).

Modified Straussler, however, is silent on the canvas membrane comprising urethane.

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JP ('977) teaches use of urethane to render a canvas membrane fire/flame proof, in addition to making it waterproof.

It would have been obvious for one skilled in the art at the time of the invention to use urethane with the flexible membrane of modified Straussler, as taught by JP ('977), because making the membrane fire/flame proof as well as waterproof would have increased the operational safety. Further, use of urethane would have been advantageous because it is inexpensive and easily available, resists abrasion, and is well known for its durability.

Allowable Subject Matter

7. Claims 4 and 18 are allowed.
8. Claims 9, 10, 13, 23, 24 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments filed 1/25/2006 have been considered but are not persuasive.
 - (i) Claim 17 has not been amended, and therefore, the previous rejection under 35 U.S.C. §102 based on Straussler ('747) has been maintained.

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- (ii) Amended claims 2, 3, 5-8, 11, 12, 16, 19-22, 25 and 26 have now been rejected under 35 U.S.C. §103(a) in view of Straussler ('747). Although the claims have been rejected on new grounds, applicant's pertinent arguments are addressed as follows:

The rejection under based on Straussler (US 2,390,747)

(A) Applicant's Argument: Applicant has argued that Straussler does not teach a vessel, but instead teaches a vehicle operable only on land. Applicant asserts that part of the plain meaning of a vessel is exhibiting buoyancy with respect to the fluid medium in which the vessel is operating, which is clearly inherent in boats, submarines, and aircraft (emphasis added). In contrast, Straussler's vehicle is clearly not a marine or an aeronautic/space transportation device, and therefore is not a vessel because it is not buoyant, and cannot operate on any medium except solid ground.

Examiner's Response: Examiner agrees with applicant assertion that a marine or aeronautical vessel is a vehicle that exhibits buoyancy with respect to the fluid medium in which the vessel is operating, but notes that the buoyancy can either be inherent in the vessel structure or can be provided by external means. For example, a helicopter is an aeronautical vessel that is able to fly only when a lifting force is provided by a rotor. As another example, consider an amphibious vessel wherein a land vehicle is rendered buoyant by use of external flotation devices. In each example, the vehicle hull is not inherently buoyant until external buoyancy or lifting arrangements are used for providing buoyancy or a lift to the vessel.

In the present case, the vehicle of Straussler clearly exhibits buoyancy for operation in water (see Straussler page 1, col. 1, lines 1-2). Although the buoyancy is provided by the

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attachment of retractable truss assembly, the vehicle is considered to be a buoyant marine vessel when it is operating in water.

(B) Applicant's Argument: Applicant has argued that Straussler's buoyancy depends on his assembly being extended. Applicant states that Straussler's assembly must be fully extended in order to render the vehicle capable of travel on water, and the vehicle will not be buoyant when the assembly is retracted (emphasis added).

Examiner's Response: It is first point out that the claims require the vessel to be buoyant when the assembly is retracted, wherein the term "retracted" has been broadly interpreted as being "at least partially retracted", without limiting its meaning to being only "completely retracted".

Further, the claims do not require the assembly to be fully extended, as being argued. Regarding Straussler, it may be noted the disclosure does not specifically require the assembly to be fully extended in order to make the vehicle buoyant.

As explained in the rejection of ¶5 above, it would have been obvious for an artisan at the time of the invention to design the retracting assembly so as to provide buoyancy for the vehicle at its full load condition, and then add an extra safety factor as a standard practice in engineering design. The motivation would have been to provide a clear margin of safety, thereby ensuring safety of the personnel and the equipment during adverse operational conditions.

Under certain conditions – such as under a no-load condition when the vessel did not have any onboard personnel and armament – at least a partial retraction of the assembly would have still provided adequate buoyancy to the vessel of Straussler. It may be noted that a

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"retraction" required by the claims does not necessarily have to be "complete retraction", and even a slight amount of retraction -- anything that is less than a fully extended state -- would still be considered a form of retraction.

(C) Applicant's Argument: Applicant asserts that Straussler does not teach a hull, as required by the claims. Applicant states that a "hull" is part of a vessel that is a marine or an aeronautic/space transportation device. In contrast, Straussler vehicle is not a vessel because such is not a marine or an aeronautic/space transportation device, and therefore, it cannot include a hull.

Examiner's Response: A hull is an outer, or outermost, frame or body of a large craft or vehicle, such as a boat, tank, airship or flying boat. As previously pointed out in response to an argument, the vehicle of Straussler qualifies as a "marine vessel" because it is operational in a marine medium, and also because it exhibits buoyancy during such operating. Therefore, the outer frame of Straussler's vessel is considered to be a hull.

(D) Applicant's Argument: Applicant states that the claims require the assembly to form a portion of the vessel hull, whereas Straussler's structure for imparting buoyancy is separate from the exterior of the vehicle and is therefore not a part of a hull. Further, applicant has argued that changing the shape of the structure does not vary the dimension of the exterior of the vehicle. Applicant has also argued that removing the structure of Straussler would not affect the exterior dimension of the vehicle itself in any way or the function of the exterior. For example, removing the superstructure would not affect the function of a tank as a respective weapons system.

Examiner's Response: As described previously, the outermost frame or body of a large craft or vehicle is considered to be a hull, such as in the case of the outermost frame of a boat, tank, airship or flying boat. In the case of Straussler, when the truss assembly is in a deployed state, the extended truss assembly reconfigures the existing hull shape to define an expanded hull. In other words, the deployed assembly, in effect, itself becomes a part of the new expanded hull that is in contact with water.

Regarding applicant's second argument that "removing the structure would not affect the exterior dimension of Straussler's vehicle or the function of the exterior", it is noted that the deployed assembly itself defines a part of the expanded hull. Such deployed condition of the structure provides the hull with an expanded dimension. Further, the argument that there is no change in the function of Straussler's vessel as a result of removing the structure, it is noted that the claims do not contain any limitation that require a change in the function of the vessel resulting from an extension of the structure. If, in fact, the "change in function" is meant to convey "change in buoyancy", the extended structure clearly increases the buoyancy of the vessel.

(E) Applicant's Argument: Straussler's superstructure has members that pivot in planes orthogonal to the portion of the vehicle exterior to which they are attached. Therefore, the members do not pivot in a plane substantially coplanar with the portion of the vessel hull.

Examiner's Response: As describes above, when the assembly of Straussler is deployed, the extended truss assembly defines a portion of the expanded outer frame or body of the vehicle that is in contact with water. Therefore, the deployed assembly, in effect, itself becomes a part of the expanded hull that is in contact with water. As such, the assembly

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members are considered to be pivoting in a plane coplanar with at least that portion of the hull which is formed by such members.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ajay Vasudeva whose telephone number is (571) 272-6689. The examiner can normally be reached on Monday-Friday 12:00 -- 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joe Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ajay Vasudeva
Examiner
Art Unit 3617


3/30/06
AJAY VASUDEVA
PATENT EXAMINER